ELSEVIER

Volume 252, Numbers 1–2, 5 May 1997

Journal of ALLOYS AND COMPOUNDS

Contents

Letters

Hydriding combustion synthesis for the production of hydrogen storage alloy L1
T. Akiyama, H. Isogai, J. Yagi (Sendai, Japan)

Incommensurate structure of the phase Zr_3Rh_4 . . . . . L5
L.A. Bendersky, R.M. Waterstrat (Gaithersburg, MD, USA)

Synthesis and crystal structure of a new quaternary compound: La_3AgSe_7Si L8
S.-H. Lin, J.-G. Mao, G.-C. Guo, J.-S. Huang (Fuzhou, P.R. China)

Crystal structure of $LaBSiO_5$ L12
L. Chi, H. Chen, H. Zhuang, J. Huang (Fujian, People's Republic of China)

Effect of surface modification of an MgNi alloy with graphite by ball-milling on the rate of hydrogen absorption L16
S. Nohara, H. Inoue, Y. Fukumoto, C. Iwakura (Osaka, Japan)

Preparation of ReB_2 single crystals by the floating zone method L19
S. Otani, T. Aizawa, Y. Ishizawa (Ibaraki, Japan)

Magnetic and electrical resistivity studies on RMn_xGe_2 (R = Gd–Er) compounds L22
V. Ivanov (Moscow, Russia), A. Szytuła (Kraków, Poland)

Formation of perovskite-type compounds $La_{0.5}Ca_{0.5}Mn_{1-x}Ti_xO_3$ $(0 \leq x \leq 0.5)$ L26
K.-Y. Wang, J. Arcas, D.-X. Chen, A. Hernando (Madrid, Spain)

Zr_6CoAs_2, the first zirconium cobalt arsenide: a new ordered variant of the Fe_2P type L29
H. Kleinke (Ames, IA, USA)

Formation and magnetic properties of compounds $Er(Fe_{1-x}Co_x)_{11.35}Nb_{0.65}$ $(0 \leq x \leq 0.4)$ L32
K.-Y. Wang, D.-X. Chen, J. Arcas, M. Multigner, P. Crespo, M. Vazquez, A. Hernando (Madrid, Spain)

Physics

Pressure induced antiferromagnetism in $(Fe_{1-x}Ni_x)_{49}Rh_{51}$ alloys 1
K. Kamenev, Z. Arnold, J. Kamarád (Prague, Czech Republic), N.V. Baranov (Ekaterinburg, Russia)

Concentration dependence of the magnetic properties of melt-quenched P-type $Mg_{30}Gd_xZn_{70-x}$ quasicrystals 6
H. Saito, K. Fukamichi (Sendai, Japan), T. Goto (Tokyo, Japan), A.P. Tsai, A. Inoue, T. Masumoto (Sendai, Japan)

Growth and some properties of $Cr_{11}Ge_{19}$ 12
T. Caillat, J.-P. Fleurial, A. Borshchevsky (Pasadena, CA, USA)

Magnetic ordering of $TbNi_3Ga_2$ studied by neutron diffraction and magnetic measurements 16
P. Schobinger-Papamantellos (Zürich, Switzerland), F. Fauth (Grenoble, France), D.P. Middleton (Eindhoven, Netherlands), K.H.J. Buschow (Amsterdam, Netherlands)

Enthalpy increment measurements of cerium mononitride, CeN 20
R.P.C. Schram, J.G. Boshoven, E.H.P. Cordfunke, R.J.M. Konings, R.R. van der Laan (Petten, Netherlands)

Magnetic ordering in $CeMg_2Si_2$ and Ce_2MgSi_2 24
S.K. Dhar (Bombay, India), P. Manfrinetti, A. Palenzona (Genova, Italy)

Electrical properties of ZnS_xCdSe_{1-x} thin films 28
R.P. Vijayalakshmi, K.P.S. Reddy, R. Venugopal, D.R. Reddy, B.K. Reddy (Tirupati, India)

Elsevier Science S.A.

Instability of the Co-magnetic moment in $Tm(Co,M)_2$ (M = Al,Si) 32
N.V. Baranov (Ekaterinburg, Russia), M.I. Bartashevich (Ekaterinburg, Russia and Tokyo, Japan), T. Goto (Tokyo, Japan), A.A. Yermakov, A.E. Karkin, A.N. Pirogov, A.E. Teplykh (Ekaterinburg, Russia)

Magnetic properties of $NdMn_6Sn_6$ and $SmMn_6Sn_6$ compounds from susceptibility measurements and neutron diffraction study 41
B. Malaman, G. Venturini, B. Chafik El Idrissi (Vandoeuvre les Nancy, France), E. Ressouche (Grenoble, France)

Uniaxial antiferromagnetic ordering in $HoNiSi_2$. A neutron and magnetic study 50
P. Schobinger-Papamantellos (Zürich, Switzerland), F. Fauth (Grenoble, France), K.H.J. Buschow (Amsterdam, The Netherlands)

Structure and magnetic ordering in the defect compound $ErGe_{1.83}$ 53
O. Oleksyn, P. Schobinger-Papamantellos (Zürich, Switzerland), C. Ritter (Grenoble, France), C.H. de Groot, K.H.J. Buschow (Amsterdam, The Netherlands)

Chemistry

Preparation and luminescence characteristics of the europium and terbium complexes incorporated into a silica matrix using a sol–gel method 59
T. Jin, S. Tsutsumi, Y. Deguchi, K. Machida, G. Adachi (Osaka, Japan)

Oxygen nonstoichiometry of $LnMnO_{3-\delta}$ (Ln = La, Pr, Nd, Sm and Y) 67
T. Atsumi, T. Ohgushi, H. Namikata, N. Kamegashira (Toyohashi, Japan)

Preparation and characterisation of $TlLn(SO_4)_2 \cdot H_2O$ (Ln = Sm to Lu, Y) 71
P.N. Iyer, K.D. Singh Mudher, N.K. Kulkarni (Bombay, India)

Structure and superconductivity in $Y_{1-x}Ln_xBa_{2-y}Sr_yCu_4O_8$ (Ln = Lu, Tb, Gd, Pr and Ce); the influence of ionic size and valency 76
P. Berastegui, S.-G. Eriksson, L.-G. Johansson (Göteborg, Sweden)

A method for designing a hydrogen absorbing $LaNi_{5-x-y}Mn_xAl_y$ alloy for a chemical refrigeration system 83
H. Nakamura, Y. Nakamura, S. Fujitani, I. Yonezu (Osaka, Japan)

Crystal structure and valence behavior of $YbPd_xGa_{11-x}$ 88
Yu.N. Grin, K. Hiebl, P. Rogl (Wien, Austria), C. Godart, E. Alleno (Meudon and Orsay, France)

Ternary transition metal antimonides and bismuthides with MgAgAs-type and filled NiAs-type structure 93
C.B.H. Evers, C.G. Richter, K. Hartjes, W. Jeitschko (Münster, Germany)

Synthesis and crystal structure of Al_3BC, the first boridecarbide of aluminium 98
F.D. Meyer, H. Hillebrecht (Freiburg, Germany)

Synthesis of monodispersed $LaPO_4$ particles using the hydrothermal reaction of an $La(edta)^-$ chelate precursor and phosphate ions 103
Y. Fujishiro, H. Ito, T. Sato, A. Okuwaki (Sendai, Japan)

Metallurgy

Review

Atomic environment classification of the tetragonal 'intermetallic' structure types 110
J.L.C. Daams (Eindhoven, Netherlands), P. Villars (Vitznau, Switzerland)

Subsolidus phase relations in $BiO_{3/2}$–$GdO_{3/2}$–CuO system 143
Y. Jinling, L. Jingkui, T. Weihua, S. Ying, C. Xiaolong, R. Guanghui (Beijing, People's Republic of China)

Adsorption of water on plutonium dioxide 148
J.M. Haschke, T.E. Ricketts (Los Alamos, NM, USA)

Thermodynamic properties of helium bubbles in aged plutonium 157
P.G. Klemens (Storrs, CT, USA), B. Cort (Los Alamos, NM, USA)

Enthalpy of formation of gold–tellurium liquid alloys 162
A. Yassin (Baghdad, Iraq), R. Castanet (Marseille, France)

Solid state phase equilibria in the Pt–Sb–Te system 166
W.-S. Kim (Taejon, Republic of Korea)

The influence of relaxation of stresses occurring during the $\beta \rightarrow \alpha$ transformation of tin on the kinetics of the transformation . 172
A.A. Matvienko, A.A. Sidelnikov (Novosibirsk, Russia)

Structural study of mechanically alloyed $Cu_{30}Cr_{70}$ by anomalous X-ray diffraction and EXAFS-spectroscopy 179
K.B. Gerasimov, S.V. Mytnichenko, S.V. Pavlov, V.A. Chernov, S.G. Nikitenko (Novosibirsk, Russia)

Influence of the isotypical A^9, A^{10} and B^{11} solvents on the partial atomic volume of tin 184
M. Nuding, M. Ellner (Stuttgart, Germany)

The Al–Cr–Fe system–Phases and phase equilibria in the Al-rich corner 192
M. Palm (Düsseldorf, Germany)

Hydrogenation behaviour and structure of $R_5Fe_2B_6$ (R = Ce, Pr, Nd, Sm, Gd and Tb) borides 201
V.A. Yartys (Birmingham, UK), G. Wiesinger (Vienna, Austria), I.R. Harris (Birmingham, UK)

The thermodynamics of hydrogen absorption/desorption by Pd–Co alloys 209
D. Wang, K.-Y. Lee, S. Luo, T.B. Flanagan (Burlington, VT, USA)

Study of the ternary phase diagrams of the cadmium–germanium–tin and cadmium–germanium–lead systems 219
E. Dichi, G. Morgant, B. Legendre (Châtenay-Malabry, France)

Materials Science

A study of the Nd–Fe–Mo system at 600°C 230
L. Zhongyi, J. Zhanpeng (Changsha, China)

Amorphization and electrochemical hydrogen storage properties of mechanically alloyed Mg–Ni 234
W. Liu, H. Wu (Shanghai, People's Republic of China), Y. Lei, Q. Wang, J. Wu (Hangzhou, People's Republic of China)

Mechanical alloying of Fe and Mg 238
A. Hightower, B. Fultz, R.C. Bowman (Pasadena, CA, USA)

Phase formation during ball milling and subsequent thermal decomposition of Ti–Al–Si powder blends 245
Z.Q. Guan, Th. Pfullmann, M. Oehring, R. Bormann (Geesthacht, Germany)

Author Index of Volume 252 253

Subject Index of Volume 252 255